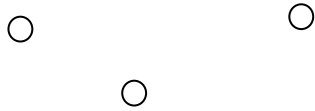
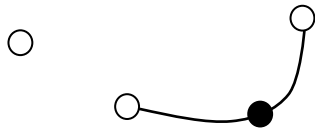


# Sprouts

The game of Sprouts was invented in 1967 by John Conway and Michael Paterson. Sprouts is a game for 2 people, and all you need is a pencil and a piece of paper. The starting point of the game has a number of dots drawn on the paper. Let's look at the example below, where we start with just 3 dots:

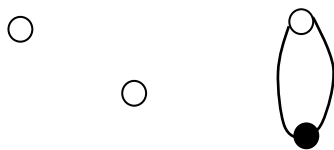


The first player joins any 2 of the dots with a line (it doesn't have to be a straight line):



When the player does this, a new dot is created in the middle of that line.

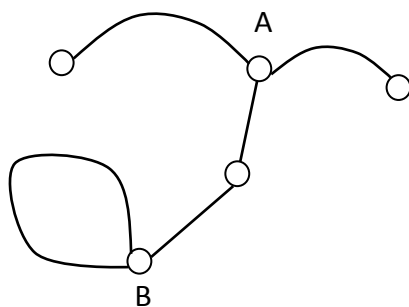
Alternatively, the line may start and end on the same spot (and, again, a new spot is created):



Now for some simple, but important rules:

- **Lines must not cross**
- **There can be no more than 3 lines leaving (or entering) a dot**

For example, in the game below, dots A and B cannot be used any more



The object of the game is to make it impossible for your opponent to draw a line. In other words, the person who draws the last line is the winner.

**Play the game a few times with a friend (start with a 3-dot game).**

**Does the person who goes first or the person who goes second tend to win?**

**Can you explain any winning tactics?**

**Can games go on forever, or do they tend to have a limited number of moves?**